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CHALICOMYS, Kaup, 1832.

Aulacodus, *Chelodus*, Kaup, 1832: *Steneofiber*, *Steneotherium*, St. Hil. 1833; *Castor*, Lin.: Kaup, Gervaise.

1. CHALICOMYS NEBRASCENSIS.

Steneofiber nebrascensis, Leidy: Pr. A. N. S. viii. 89; ix. 89.

DREPANODON, Nesti, 1826.

Megantereon, Croiz, 1828; *Agnotherium*, *Machairodus*, Kaup, 1833; *Steneodon*, Croiz, 1833; *Smilodon*, Lund, 1841; *Ursus*, L., *Felis*, L.: Cuv., Croiz, Brav., Blainv., &c.

1. DREPANODON PRIMAÆVUS.

Machairodus primaævus, Leidy and Owen: Anc. Fauna of Nebraska, 95; Pr. A. N. S. ix. 90.

DORCATHERIUM, Kaup, 1833.

Leptomeryx, Leidy.

1. DORCATHERIUM EVANSI.

Leptomeryx Evansi, Leidy: Proc. A. N. S. vi. 394; ix. 89. *Leptomeryx* is perhaps at most only subgenerically distinct from *Dorcatherium*. Some fragments of jaws with teeth, obtained by Dr. F. V. Hayden, prove that the large tubercle, which is described as rising out of the base internally of the upper true molars, in a specimen of the skull of the same animal, is an inconstant character, and independent of this, the molar teeth of *Leptomeryx* and *Dorcatherium* are identical in form.

September 1st, 1857.

Vice-President BRIDGES in the Chair.

Dr. Leidy remarked that there appeared to exist a general misconception in regard to the dentition of the *Mososaurus*. The animal is almost universally called an acrodont reptile, or one in which the teeth are inserted upon, or are co-ossified with, the border of the jaws. A number of specimens of teeth and fragments of jaws, in the museum of the Academy, prove this appellation to be incorrect.

The teeth of *Mososaurus* have a recurved pyramidal crown, and a more massive, vertically oblong root, which is often twice the length of the crown. The root is inserted for three-fourths of its extent into a correspondingly deep socket, with the sides of which it is co-ossified. The centre of the teeth is occupied by a fusiform pulp cavity, communicating with one or more vascular canals passing through the fang.

In the reproduction of the teeth, it appears the new ones commence to be developed attached to the gum, on the postero-internal side of the alveoli. As they proceed, they penetrate into the latter, by exciting an absorption of the substance of the fang of the old teeth in a direction obliquely outward and forward. The cavity for the new tooth increases in size at the expense of the substance of the fang of the old one. The pulp cavity of the old tooth, in consequence of the ossification of its pulp, appears to recede before the increasing cavity of the new tooth. The latter cavity finally makes a communication with the former, though this appears not always to be the case; and subsequently the fang of the old tooth becomes so completely excavated as to form a mere capsule, from which its crown is broken away, or shed, through comparatively little violence. In the further progress of the newly protruding tooth, the osseous capsule formed from the fang of the old tooth is gradually obliterated, except a portion which remains as a partition from the next alveolus.

[September,

Dr. Leidy stated that a few evenings since, in the yard attached to his residence, he for the first time had the opportunity of observing the male Tree-cricket, *Oecanthus*, while chirping. The sound, as is well known, is produced by the insect elevating its wings and vibrating them laterally; by which movement the edge of one wing-cover is rubbed upon a rasp or crepitaculum of the other. The sound is like that of the Field-cricket, *Acheta*, instead of a peculiar one as Dr. L. had supposed it to be. The note he had formerly attributed to the Tree-cricket, and with which the woods are vocal during the nights of this season of the year, is one resembling that produced by the quick and repeated snapping of the end of a quill pen or tooth-pick during a second or two of time. Upon examination Dr. L. found this sound to proceed from the male Katy-did. *Platyphyllum*; and the mechanism producing it is similar to the stridulating apparatus of the crickets, *Acheta*, *Oecanthus*.

In the male Katy-did, the crepitaculum, situated on the under surface of the dorsal portion of the wing covers, consists of a transverse, fusiform, concave ridge, provided with about fifty serratures; and is best developed in the left wing cover. The instrument which rubs against this crepitaculum is the sharp, elevated, inner edge of the dorsal portion of the wing covers, at the side of what might be considered a trilateral tambourine, which is best developed in the right wing cover. The song (if the term may be used) of the male Katy-did ordinarily is produced by the sharp edge on the inner side of the tambourine of the right wing cover, rubbing against the rasp or crepitaculum of the left wing cover.

Dr. L. continued, he had always supposed the male Katy-did produced the familiar sound after which the insect is named, and that the female was silent. This he believed was the generally received opinion; and Dr. Thad. Wm. Harris (*Insects Injurious to Vegetation*, page 138), remarks that at night "the joyous males begin the tell-tale call." Dr. L. added, after further investigation he was happy to be able to clear the male from the libellous imputation, and that, as was usually the case among our own race, the accusation, recrimination, and denial, of katy-did, katy-didn't, came from the female herself. The apparatus by which the female Katy-did tells her tale is totally different from that of the male, though situated as in this, in the dorsal portion of the wing covers. In the dorsal portion of the right wing cover between the marginal vein, and another about half a line from it, there are about five strong transverse veins and some smaller ones, provided upon their upper surface each with a row of strong spines bent back at right angles. All other portions of the right and the whole of the left wing cover are destitute of such spines. In the left wing cover, the corresponding position to that just described is occupied by a fine rete of veins as elsewhere; and it is the inner edge of this wing cover rubbing against the hooks of the right one, which produces the tell-tale sound of katy-did, katy-didn't.

September 1st, 1857.

Vice President BRIDGES in the Chair.

Dr. J. A. Meigs read part of a letter from Mr. J. Judson Barclay, dated Philadelphia, Aug. 21, 1857, accompanying the flattened skull presented by him this evening.

"On referring to my journal, (kept during several years residence in Jerusalem,) I find a brief mention of the circumstances attending the discovery of the very singular skull now in your possession, though I fear it will afford but little aid in assigning any other place of habitation to this unfortunate adventurer, than the subterranean *locum tenens* of his bones.